

In the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

- 1 1. (Currently Amended) An input/output (I/O) bridge device,
2 comprising:
3 a parallel input port ;
4 a serial output port and a plurality of parallel output ports;
5 a controller coupled to the parallel input port and configured
6 to detect whether the input/output (I/O) bridge device is
7 connected to a docking station,
8 to route signals from the parallel input port to ~~either~~
9 the serial ~~output~~ output port ~~or~~ if the input/output (I/O)
10 bridge device is connected to a docking station; and
11 to route signals from the parallel input port to the at
12 least one of the parallel output ports, or both if the
13 input/output (I/O) bridge device is not connected to a docking
14 station; and
15 serialization logic coupled to the controller and serial
16 output port, the serialization logic receiving as input an I/O
17 signal in a parallel format from the parallel input port and
18 outputting the I/O signal in a serial format.
- 1 2. (Original) The I/O bridge device according to Claim 1, wherein
2 the I/O bridge device further comprises a plurality of legacy input
3 / output ports adapted to couple to legacy connectors of a
4 computer.
- 1 3. (Original) The I/O bridge device according to Claim 1 further
2 comprising an LPC interface coupled to the controller and providing
3 thereto routing control signals.

1 4. (Original) The LPC I/O bridge device according to Claim 1,
2 further comprising:

3 a packetizer/depacketizer coupled to the serialization logic
4 and controller.

1 5. (Original) The I/O bridge device according to Claim 4, further
2 comprising a system management (SM) bus controller, and floppy
3 drive controller coupleable to the controller.

1 6. (Original) The I/O bridge device according to Claim 5, further
2 comprising configuration and control registers, a watchdog timer, a
3 fan speed control and monitor, and an Advanced Configuration and
4 Power Interface (ACPI) coupled to the LPC controller.

1 7. (Original) The I/O bridge device according to Claim 1, wherein
2 at least the controller and serialization logic reside on a single
3 integrated circuit.

1 8. (Currently Amended) A portable computer including a plurality
2 of I/O ports and a low pin count (LPC) input/output (I/O) bridge
3 device coupled to an I/O bus, and a docking connector coupled to
4 the LPC I/O bridge device, wherein the LPC I/O bridge device
5 comprises:

6 an LPC controller coupled to the I/O bus and docking connector
7 adapted

8 to detect whether the portable computer is coupled to a
9 docking station via the docking connector, and

10 to route data transmissions from the I/O bus to the I/O
11 ports if the portable computer is not coupled to a docking
12 station via the docking connector, and

13 to route data transmissions from the I/O bus to the
14 docking connector, ~~or both~~ if the portable computer is coupled
15 to a docking station via the docking connector; and
16 serialization logic coupled to the LPC controller adapted
17 to serialize the data transmissions routed to the docking
18 connector.

1 9. (Original) The portable computer according to Claim 8, wherein
2 the I/O ports comprise USB, AC-97, serial ports, floppy disk
3 controller (FDC), IEEE 1284, IEEE 1394 or memory expansion
4 interface ports.

1 10. (Original) The portable computer according to Claim 9, wherein
2 the memory expansion interface ports are adapted to interface with
3 flash, multi-media card (MMC), smart media, smart card, or memory
4 stick memory devices.

1 11. (Original) The portable computer according to Claim 8, wherein
2 the portable computer comprises a notebook computer, personal
3 digital assistant (PDA), or wearable computer.

1 12. (Original) The portable computer according to Claim 8, wherein
2 the docking connector comprises less than 200 pins.

1 13. (Original) The portable computer according to Claim 12, wherein
2 the docking connector comprises less than 10 pins.

1 14. (Original) The portable computer according to Claim 8, wherein
2 the LPC I/O bridge device further comprises a
3 packetizer/depaketizer coupled to the serialization logic and LPC
4 controller, and a system management (SM) bus controller, floppy
5 drive controller,

6 configuration and control registers, a watchdog timer, a fan
7 speed control and monitor, and an Advanced Configuration and Power
8 Interface (ACPI) coupled to the LPC controller.

15 to 18. (Cancelled)

1 19. (Currently Amended) A docking system, comprising:
2 a portable computer including
3 a plurality of I/O ports and a low pin count (LPC)
4 input/output (I/O) bridge device coupled to an I/O bus, and a
5 docking connector coupled to the LPC I/O bridge device; and
6 a docking station coupleable to the docking connector, wherein
7 the portable computer LPC I/O bridge device comprises:
8 an LPC controller coupled to the I/O bus and docking
9 connector adapted
10 to detect whether the portable computer is coupled
11 to a docking station via the docking connector, ~~and~~
12 to route data transmissions from the I/O bus to the
13 I/O ports if the portable computer is not coupled to a
14 docking station via the docking connector, and
15 to route data transmissions from the I/O bus to the
16 docking connector, ~~or both~~ if the portable computer is
17 coupled to a docking station via the docking connector;
18 and
19 serialization logic coupled to the LPC controller adapted
20 to serialize the data transmissions routed to the docking
21 connector; wherein the docking station is adapted to receive
22 the serialized data transmissions from the LPC I/O bridge
23 device through the portable computer docking connector.

1 20. (Original) The docking system according to Claim 19, wherein
2 the docking connector comprises less than 10 pins.

1 21. (Original) The docking system according to Claim 19, wherein
2 the I/O ports comprise USB, AC-97, Ethernet, or IEEE 1284, IEEE
3 1394, or memory expansion interface ports, wherein the portable
4 computer comprises a notebook computer, personal digital assistant
5 (PDA), or wearable computer, and wherein the docking station
6 comprises a port replicator or expansion chassis.

1 22. (Original) The docking station according to Claim 21, wherein
2 the memory expansion interface ports are adapted to interface with
3 flash, multi-media card (MMC), smart media, smart card, or memory
4 stick memory devices.

1 23. (Original) The docking system according to Claim 19, wherein
2 the portable computer LPC I/O bridge device comprises a single
3 integrated circuit.

1 24. (Original) The docking system according to Claim 19, wherein
2 the docking station includes a LPC I/O bridge device adapted to
3 handle the serialized data transmissions from the portable
4 computer.

1 25. (Currently Amended) A method of bridging input/output (I/O)
2 data transmissions between a portable computer and a docking
3 station using a docking connector, the portable computer having a
4 plurality of legacy ports coupled to an I/O bus, a low pin count
5 (LPC) I/O bridge device coupled to the I/O bus, and a docking
6 connector coupled to the LPC I/O bridge device, the method
7 comprising:
8 detecting whether the portable computer is coupled to the
9 docking station via the docking connector;
10 ~~receiving information from an LPC interface;~~

11 ~~determining from the LPC interface information whether to~~
12 route data transmissions from the I/O bus to the legacy ports if
13 the portable computer is not connected to the docking station via
14 the docking connector,
15 determining to route data transmissions from the I/O but to
16 the docking connector, ~~or both~~ if the portable computer is
17 connected to the docking station via the docking connector;
18 serializing data transmissions to be routed to the docking
19 connector; and
20 routing data transmissions as determined.

1 26. (Original) The method according to Claim 25, wherein the
2 portable computer LPC I/O bridge device includes an LPC controller
3 adapted to detect docking and route data transmissions.

1 27. (Original) The method according to Claim 25, wherein the
2 docking connector comprises less than 10 pins.